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COHEN, PONTANI, LIEBERMAN & PAVANE			LEYSON, JOSEPH S	
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NEW YORK, NY 10176			1722	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/827,059

Applicant(s)

CHSZANIECKI ET AL.

Examiner

Joseph Leyson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/19/06 to 11/29/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/19/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: in paragraph [0005], the disclosure refers to the claims. The disclosure should NOT refer to the claims because the content of the claims can change during prosecution.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 10-13, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Rohn (U.S. Patent 3,493,996).

Rohn (U.S. Patent 3,493,996) teaches an extruder including a barrel (61, 62 and 69) having at least one axial bore extending to a downstream end of the barrel (61, 62 and 69), the downstream end having a contact surface (see fig. 1), a cutting plate (40 and 60) of a granulating unit (i.e., see fig. 1), the cutting plate (40 and 60) being received against the contact surface (see fig. 1), and a plurality of heating elements 68 in the barrel (61, 62 and 69) in the immediate vicinity of the contact surface (see fig. 1). The barrel includes a first axial barrel segment (61, 62 and 69) and a second axial barrel segment 38. The heating elements 68 are heating cartridges, the barrel (61, 62 and 69) has continuous bores passing therethrough in a circle, and the heating cartridges 68 are

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received in the (i.e., fig. 1; col. 4, lines 36-47). The barrel (61, 62 and 69) includes a mounting recess in which said contact surface is located, the cutting plate (40 and 60) having a volume, at least half of the volume being received in the recess (see fig. 1). The recess and the cutting plate (40 and 60) each have radially facing surfaces which are in contact with each other (fig. 1).

4. Claims 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Hopkin (U.S. Patent 3,676,029).

Hopkin (U.S. Patent 3,676,029) teaches an extruder including a barrel 41 having at least one axial bore 42 extending to a downstream end of the barrel 41, the downstream end having a contact surface (see fig. 3), a cutting plate 57 of a granulating unit 30, the cutting plate 57 being received against the contact surface (see fig. 3), and a plurality of heating elements 47 in the barrel 41 in the immediate vicinity of the contact surface (see fig. 3). The barrel 41 includes two axial barrel segments (i.e., see figs. 1 and 3; col. 2, lines 53-71). The heating elements 47 are heating cartridges (col. 2, lines 68-71) which are received in bores (see figs. 1 and 3).

5. Claims 10, 11, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamilton (U.S. Patent 3,599,285).

Hamilton (U.S. Patent 3,599,285) teaches an extruder including a barrel (20 and 25) having at least one axial bore extending to a downstream end of the barrel (20 and 25), the downstream end having a contact surface 43, a cutting plate 30 of a granulating unit (i.e., fig. 5, col. 3, lines 20-52), the cutting plate 30 being received against the contact surface 43, and a plurality of heating elements (i.e., see col. 2, line 49 to col. 3,

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line 8, i.e. steam passageways 26a and 26b and steam chamber having steam inlet 19a and steam outlet 19b) in the barrel (20 and 25) in the immediate vicinity of the contact surface 43. The barrel includes a first axial barrel segment 11 and a second axial segment (20 and 25). The barrel includes a mounting recess in which the contact surface 43 is located, and the cutting plate 30 has a volume, at least half of the volume being received in the recess (see fig. 5). The recess and the plate 43 each have radially facing surfaces which are in contact with each other (see fig. 5).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hopkin (U.S. Patent 3,676,029) in view of Hoffman et al. (U.S. Patent 3,230,582) and Von Erdberg (U.S. Patent 3,480,998).

Hopkin (U.S. Patent 3,676,029) discloses the claimed extruder as mentioned above, except for the heating cartridges being received in continuous bores which are arranged in parallel pairs at right angles to each other to form a square in a plane transverse to the at least one axial bore.

Hoffman et al. (U.S. Patent 3,230,582) disclose an extruder including means for applying heat to maintain the temperature of a plastic at a desired temperature including passageways (i.e., bores) 150 formed through a body of the extruder and connected with corresponding transverse passageways forming encircling passageways of square configuration is well known in the art (i.e., fig. 1; col. 4, lines 66-75). Note that if passageways 150 in fig. 1 are connected with corresponding transverse passageways to form encircling passageways of square configuration, then the square configuration would be in a plane transverse to axial bore 15.

Von Erdberg (U.S. Patent 3,480,998) discloses an extruder with heating means including longitudinal passages (i.e., bores) 17. The bores can be used for the circulation of heat exchange fluid or the reception of electrical cartridge heaters (col. 1, line 59 to col. 2, line 2).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the extruder of Hopkin (U.S. Patent 3,676,029) such that the bores for the heating cartridges are connected with corresponding transverse bores

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arranged in parallel pairs at right angles to each other to form a square in a plane transverse to the at least one axial bore because such a modification is well known in the extrusion art and would provide an art recognized alternative heating configuration in which the bores encircle the at least one axial bore enabling the extrudate to be heated from all around the at least one axial bore as disclosed by Hoffman et al. (U.S. Patent 3,230,582), and to modify the corresponding transverse bores to receive cartridge heaters because it is well known in the extrusion art that heating bores can be used for the circulation of heat exchange fluid or the reception of electrical cartridge heaters, as disclosed by Von Erdberg (U.S. Patent 3,480,998).

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton (U.S. Patent 3,599,285) in view of Hopkin (U.S. Patent 3,676,029).

Hamilton (U.S. Patent 3,599,285) discloses an extruder as mentioned above. Note that element 25 is also a steam (i.e., hot liquid) jacket. However, Hamilton (U.S. Patent 3,599,285) does not disclose heating cartridges.

Hopkin (U.S. Patent 3,676,029) discloses an extruder as mentioned above and further discloses that heating cartridges 47 are far more effective in maintaining uniform viscosity flow and temperature of the plastic than the conventional hot liquid jackets of the prior art (col. 4, lines 28-31).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the steam jacket of Hamilton (U.S. Patent 3,599,285) by replacing it with heating cartridges because heating cartridges are far more effective in

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maintaining uniform viscosity flow and temperature of plastic than hot liquid jackets, as disclosed by Hopkin (U.S. Patent 3,676,029).

10. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton (U.S. Patent 3,599,285) in view of Hopkin (U.S. Patent 3,676,029) as applied to claim 12 above, and further in view of Hoffman et al. (U.S. Patent 3,230,582) and Von Erdberg (U.S. Patent 3,480,998).

Hoffman et al. (U.S. Patent 3,230,582) disclose an extruder including means for applying heat to maintain the temperature of a plastic at a desired temperature including passageways (i.e., bores) 150 formed through a body of the extruder and connected with corresponding transverse passageways forming encircling passageways of square configuration is well known in the art (i.e., fig. 1; col. 4, lines 66-75). Note that if passageways 150 in fig. 1 are connected with corresponding transverse passageways to form encircling passageways of square configuration, then the square configuration would be in a plane transverse to axial bore 15.

Von Erdberg (U.S. Patent 3,480,998) discloses an extruder with heating means including longitudinal passages (i.e., bores) 17. The bores can be used for the circulation of heat exchange fluid or the reception of electrical cartridge heaters (col. 1, line 59 to col. 2, line 2).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the extruder such that bores for the heating cartridges are connected with corresponding transverse bores arranged in parallel pairs at right angles to each other to form a square in a plane transverse to the at least one

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axial bore because such a modification is well known in the extrusion art and would provide an art recognized alternative heating configuration in which the bores encircle the at least one axial bore enabling the extrudate to be heated from all around the at least one axial bore as disclosed by Hoffman et al. (U.S. Patent 3,230,582), and to modify the corresponding transverse bores to receive cartridge heaters because it is well known in the extrusion art that heating bores can be used for the circulation of heat exchange fluid or the reception of electrical cartridge heaters, as disclosed by Von Erdberg (U.S. Patent 3,480,998).

11. Claims 15 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton (U.S. Patent 3,599,285) in view of German reference (DE 196 38 994) and German reference (DE G92 00 047.9).

Hamilton (U.S. Patent 3,599,285) discloses an extruder as mentioned above, except for at least one axial bore including a pair of overlapping axial bores which open in a channel having a cross section at the contact surface, the cutting plate having a feed opening with a cross section which is congruent with the cross-section of the channel, and the channel being located wholly in the barrel segment at the contact surface.

German reference (DE 196 38 994) discloses an extruder including a barrel with a plurality of axial barrel segments 12, 43, 44, 47, the barrel having at least one axial bore which extends to a downstream end of the barrel, the downstream end of the barrel having a contact surface, a cutting plate 25, 36 of a granulating unit 16, the cutting plate 25, 36 being received against the contact surface, and circulation heating

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means in the barrel in the immediate vicinity of the contact surface including feed line 57, discharge line 58 and channel 59. Two intermeshing extruder screws 45, 46 are placed in the at least one axial bore, the at least one axial bore opening in a channel having a cross section at the contact surface (fig. 6), the cutting plate 25, 36 having a feed opening with a cross section which is congruent with the cross-section of the channel (fig. 6), and the channel being located wholly in the barrel segment at the contact surface (fig. 6).

German reference (DE G92 00 047.9) discloses a twin screw extruder with a barrel with a plurality of segments having a pair of overlapping axial bores (see figs. 1, 2a, 2b, 2c).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the at least one axial bore to include a pair of overlapping axial bores which open in a channel having a cross section at the contact surface, the cutting plate having a feed opening with a cross section which is congruent with the cross-section of the channel, and the channel being located wholly in the barrel segment at the contact surface because such modifications are well known in the art as respectively disclosed by German reference (DE G92 00 047.9) and German reference (DE 196 38 994) and would enable the cutting plate to be supplied with material from a twin screw extruder.

12. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over German reference (DE 196 38 994) in view of Hopkin (U.S. Patent 3,676,029) and Von Erdberg (U.S. Patent 3,480,998).

German reference (DE 196 38 994) discloses an extruder including a barrel with a plurality of axial barrel segments 12, 43, 44, 47, the barrel having at least one axial bore which extends to a downstream end of the barrel, the downstream end of the barrel having a contact surface, a cutting plate 25, 36 of a granulating unit 16, the cutting plate 25, 36 being received against the contact surface, and circulation heating means in the barrel in the immediate vicinity of the contact surface including feed line 57, discharge line 58 and channel 59. Two intermeshing extruder screws 45, 46 are placed in the at least one axial bore, the at least one axial bore opening in a channel having a cross section at the contact surface (fig. 6), the cutting plate 25, 36 having a feed opening with a cross section which is congruent with the cross-section of the channel (fig. 6), and the channel being located wholly in the barrel segment at the contact surface (fig. 6). However, German reference (DE 196 38 994) does not disclose that the heating means include heating cartridges.

Hopkin (U.S. Patent 3,676,029) discloses an extruder including a barrel 41 having at least one axial bore 42 extending to a downstream end of the barrel 41, the downstream end having a contact surface (see fig. 3), a cutting plate 57 of a granulating unit 30, the cutting plate 57 being received against the contact surface (see fig. 3), and a plurality of heating elements 47 in the barrel 41 in the immediate vicinity of the contact surface (see fig. 3). The heating elements 47 are heating cartridges (col. 2, lines 68-71) which are received in bores (see figs. 1 and 3).

Von Erdberg (U.S. Patent 3,480,998) discloses an extruder with heating means including longitudinal passages (i.e., bores) 17. The bores can be used for the

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circulation of heat exchange fluid or the reception of electrical cartridge heaters (col. 1, line 59 to col. 2, line 2).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the circulation heating means of German reference (DE 196 38 994) with the heating cartridges of Hopkin (U.S. Patent 3,676,029) because such a modification would provide an art recognized alternative configuration for providing heat to control material temperatures in the immediate vicinity of the contact surface, as disclosed by Hopkin (U.S. Patent 3,676,029), and because it is well known in the extruder art that circulation of heat exchange fluid and cartridge heaters are interchangeable heating means in the art, as disclosed by Von Erdberg (U.S. Patent 3,480,998).

13. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over German reference (DE 196 38 994) in view of Hopkin (U.S. Patent 3,676,029) and Von Erdberg (U.S. Patent 3,480,998) as applied to claims 10-12 above, and further in view of Hoffman et al. (U.S. Patent 3,230,582).

Hoffman et al. (U.S. Patent 3,230,582) disclose an extruder including means for applying heat to maintain the temperature of a plastic at a desired temperature including passageways (i.e., bores) 150 formed through a body of the extruder and connected with corresponding transverse passageways forming encircling passageways of square configuration is well known in the art (i.e., fig. 1; col. 4, lines 66-75). Note that if passageways 150 in fig. 1 are connected with corresponding transverse passageways

to form encircling passageways of square configuration, then the square configuration would be in a plane transverse to axial bore 15.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the heating means with bores formed through the barrel and connected with corresponding transverse bores forming continuous passageways of square configuration because such a modification for heating means is well known in the art as disclosed by Hoffman et al. (U.S. Patent 3,230,582) and would provide heating means encircling the axial bore thus enabling heating of the extrudate from all around the axial bore.

14. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over German reference (DE 196 38 994) in view of Hopkin (U.S. Patent 3,676,029) and Von Erdberg (U.S. Patent 3,480,998) as applied to claims 10-12 above, and further in view of German reference (DE G92 00 047.9).

German reference (DE 196 38 994) does not disclose that the at least one axial bore is a pair of overlapping axial bores.

German reference (DE G92 00 047.9) discloses a twin screw extruder with a barrel with a plurality of segments having a pair of overlapping axial bores (see figs. 1, 2a, 2b, 2c).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the at least one axial bore to be a pair of overlapping axial bores because such a modification for a twin screw extruder is well known and conventional in the art as disclosed by German reference (DE G92 00

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047.9) and would provide art recognized working configuration for the barrel and twin screws of German reference (DE 196 38 994).

15. Claims 17 and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over German reference (DE 196 38 994) in view of Hopkin (U.S. Patent 3,676,029) and Von Erdberg (U.S. Patent 3,480,998) as applied to claims 10-12 above, and further in view of Hamilton (U.S. Patent 3,599,285).

Hamilton (U.S. Patent 3,599,285) teaches an extruder including a barrel (20 and 25) having at least one axial bore extending to a downstream end of the barrel (20 and 25), the downstream end having a contact surface 43, a cutting plate 30 of a granulating unit (i.e., fig. 5, col. 3, lines 20-52), the cutting plate 30 being received against the contact surface 43, and means for mounting the cutting plate 30 to the barrel including the barrel having a mounting recess in which the contact surface 43 is located, the cutting plate 30 having a volume, at least half of the volume being received in the recess (see fig. 5), the recess and the plate 43 each have radially facing surfaces which are in contact with each other (see fig. 5).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the extruder with means for mounting a cutting plate to a barrel as disclosed by Hamilton (U.S. Patent 3,599,285) because such a modification would provide an art recognized alternative means for mounting a cutting plate to a barrel as disclosed by Hamilton (U.S. Patent 3,599,285).

Conclusion

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16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lengerich et al. (U.S. Patent 6,595,765) is the English equivalent of DE 196 38 994 cited by Applicant in the PTO Form 1449 filed on April 19, 2004. Kleeb (U.S. Patent 3,324,510) and Yoshida et al. (U.S. Patent 6,220,847) are cited as of interest to show the state of the art.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Leyson whose telephone number is (571) 272-5061. The examiner can normally be reached on M-F 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gupta Yogendra can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JL


ROBERT DAVIS
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4/12/06